Skytale Cipher

Kit contains:

- 2 secret messages
- 1 length of PVC pipe
- 1 length of pipe insulation
- Extra strips of paper

You will need: tape and a pencil.

MORTON GROVE PUBLIC LIBRARY
6140 Lincoln Avenue, Morton Grove, IL 60053
Youth Info Desk: 847-929-5102 | mgpl.org

WHAT IS A SKYTALE CIPHER?

A **skytale cipher** is a way to disguise and share secret messages. A long strip of paper is wrapped around a cylinder, and then a message is written on the surface. When the strip is unwound, all you see are mixed up or **transposed** letters. Your message is safely hidden. Only a person who has the right size cylinder can decipher the message. Skytale cipher was used by the Spartans in military campaigns. In fact, skytale is the ancient Greek word for “baton.” To wrap up, the cylinder is the skytale, which is used for ciphering and deciphering the messages.

ACTIVITY 1: DECIPHER THE HIDDEN MESSAGES

There are two hidden messages and two cylinders with different diameters in your STEMonade kit. Wrap the strips of paper tightly around the pieces of PVC pipe and pipe insulation. Can you decipher the messages? What happens if you wrap the message around the wrong skytale?

Skytale is pronounced “skee-TA-lee,” not “sky tail.” I regret to inform you that there are no space kitties in this activity.

ACTIVITY 2: CREATE YOUR OWN SECRET MESSAGES

Use the blank strips of paper to create your own secret messages.

Step 1. Wrap a strip of paper around the skytale of your choice. You can use a cylinder from your kit or something sneaky such as the frame of a bicycle. Tape the ends of your paper in place.

Step 2. Write a message across the resulting paper surface. Then untape the strip of paper.

Step 3. To let someone decipher your message, give them the strip of paper and reveal the identity of the correct sktyale.